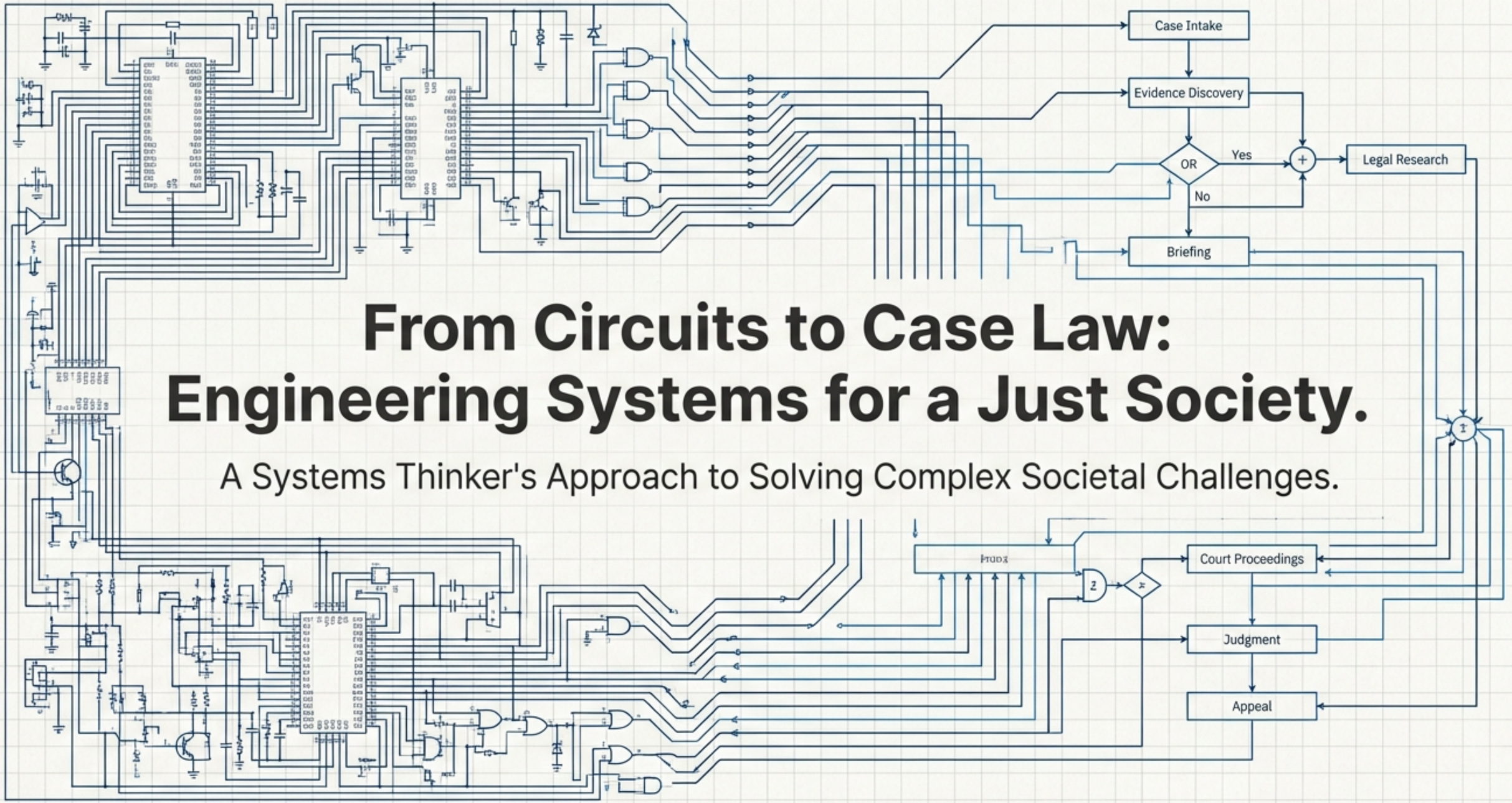

From Circuits to Case Law: Engineering Systems for a Just Society.

A Systems Thinker's Approach to Solving Complex Societal Challenges.

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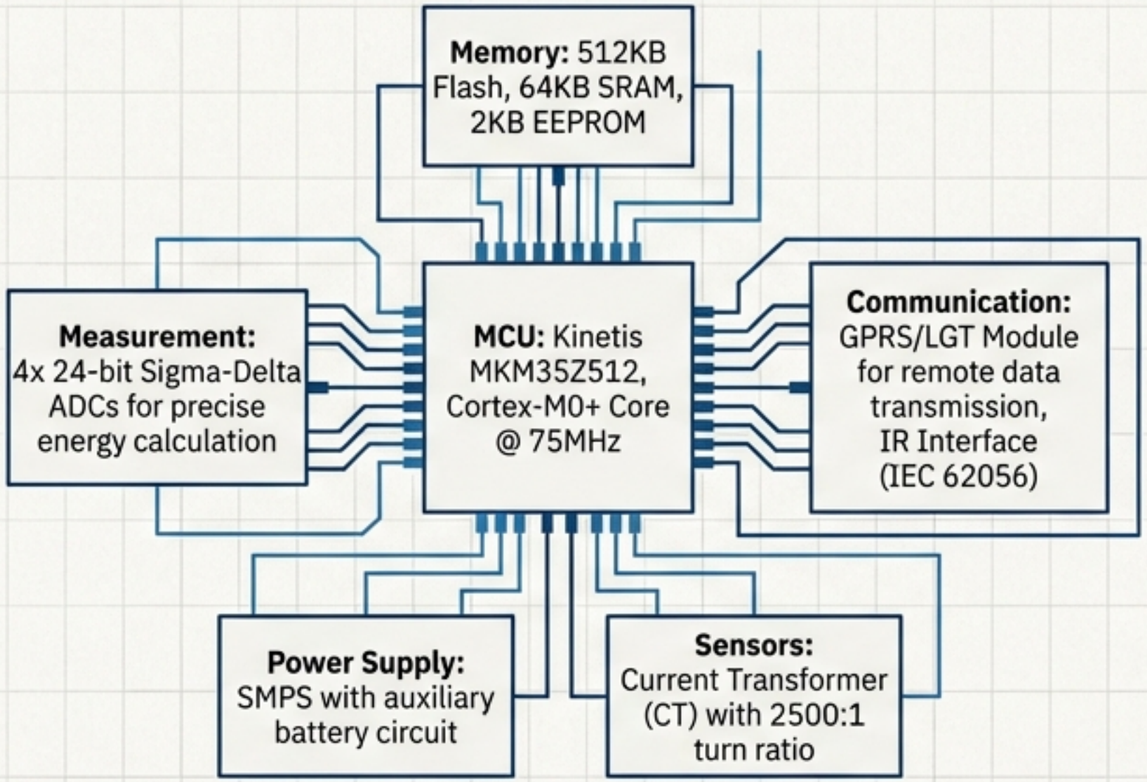
Mastery of Physical Systems: The Three-Phase Smart Power Meter.


Memory: 512KB Flash, 64KB SRAM, 2KB EEPROM
Measurement: 4x 24-bit Sigma-Delta ADCs for precise energy calculation
MCU: Kinetis MKM35Z512, Cortex-M0+ Core @ 75MHz
Communication: GPRS/LGT Module for remote data transmission, IR Interface (IEC 62056)
Power Supply: SMPS with auxiliary battery circuit
Sensors: Current Transformer (CT) with 2500:1 turn ratio

Technical Specifications	
Accuracy Class:	0.5 (0.5%)
Nominal Voltage:	240 VAC +20%
Current Range:	0-60A (10A nominal, up to 72A dynamic)
Functionality:	Measures V, A, kW, kVAR, VA, kWh (import/export), kVARh (import/export)

Demonstrated ability to design, from component level up, a sophisticated hardware system for critical infrastructure monitoring and management.

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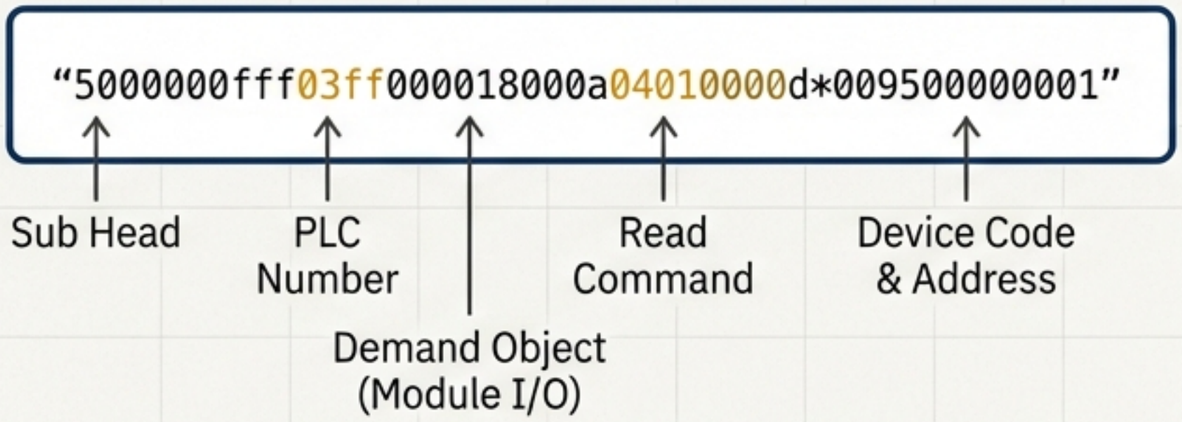
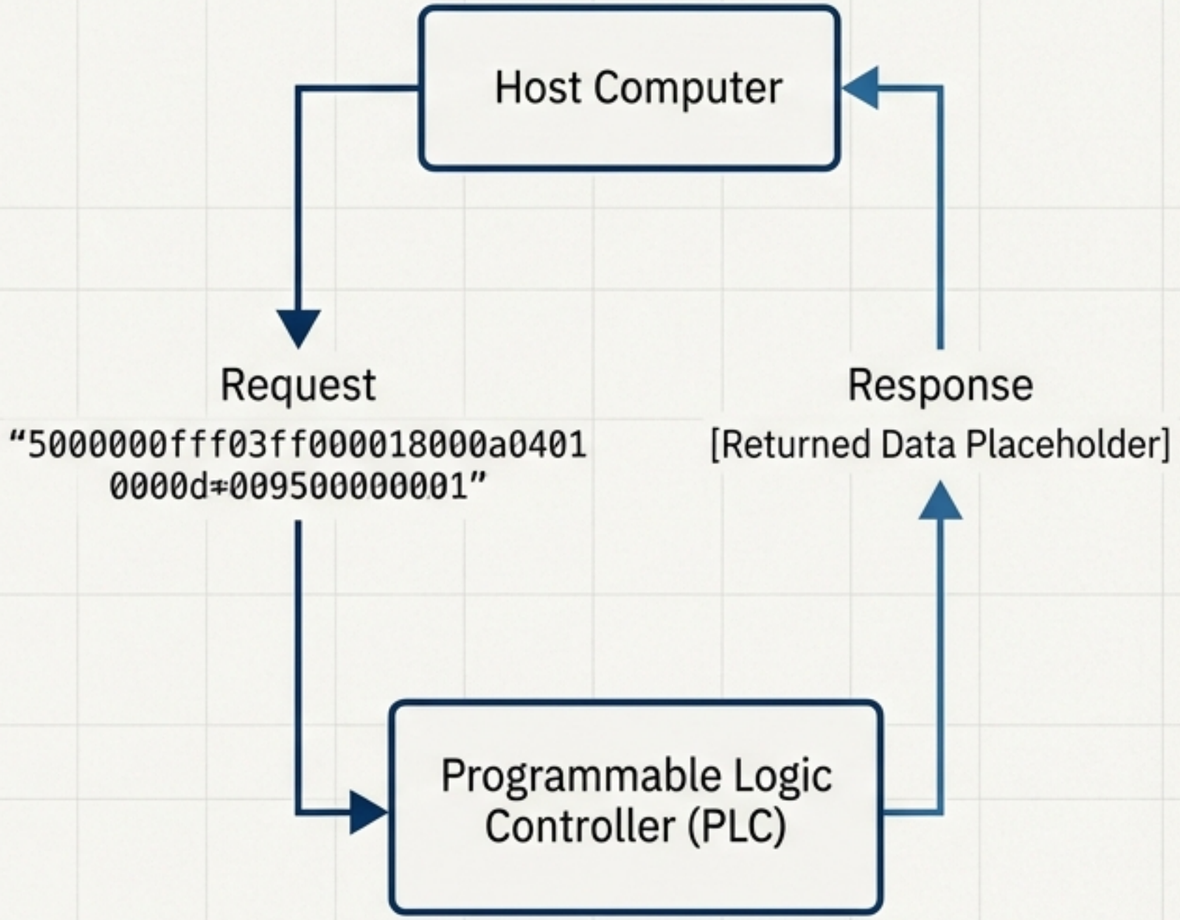
Interfacing with Industrial Systems: PLC Communication and Control.

Developing software to read from and write to Programmable Logic Controllers (PLCs), the backbone of industrial automation.

Example 1: Reading Data from a PLC (C#)



Example 2: Writing Data to a PLC (C#)



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Building Digital Tools: From Foundational Logic to User Applications.

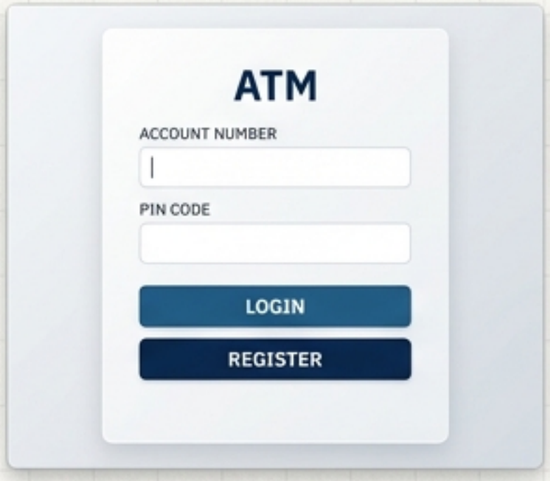
Basic Software Engineering Concepts | Testing & I/O Documentation | Structured Programming | Flow Charts

Low-Level Logic | Hexadecimal | Logic Gates | Shift Registers

Application Showcase 1: Automated Teller Machine (VB.NET)

A functional ATM system prototype developed in VB.NET with an MS Access database.

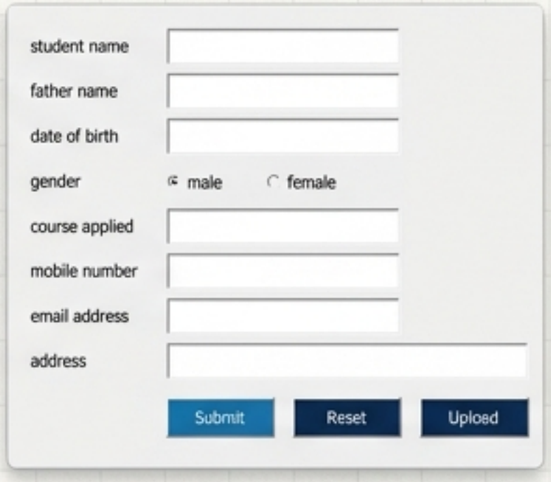
Features:
Register Account, Deposit, Withdraw, Transfer, Balance Inquiry, Block Account.



Application Showcase 2: Automated Student Registration (VBA & Excel)

A database-driven form in Excel to automate and streamline student data entry and management.

Features:
UserForm for data entry, database sheet for storage, functions for Submit, Reset, Upload.



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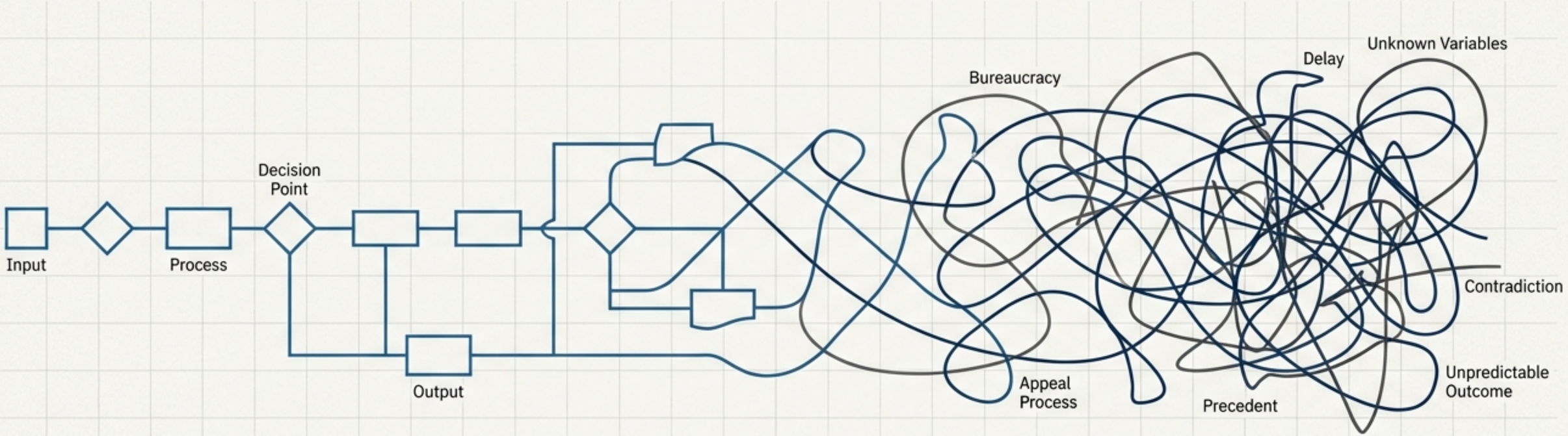
The Ultimate Systems Challenge: Deconstructing the Labyrinth of Justice

The principles of systems analysis are universal. They can be applied to electrical grids and software architecture—and to the intricate, often fraught processes of the legal and administrative state.



What happens when an engineer, trained to find and fix points of failure in circuits and code, is forced to navigate a system where the protocols are opaque and the outcomes are unpredictable?

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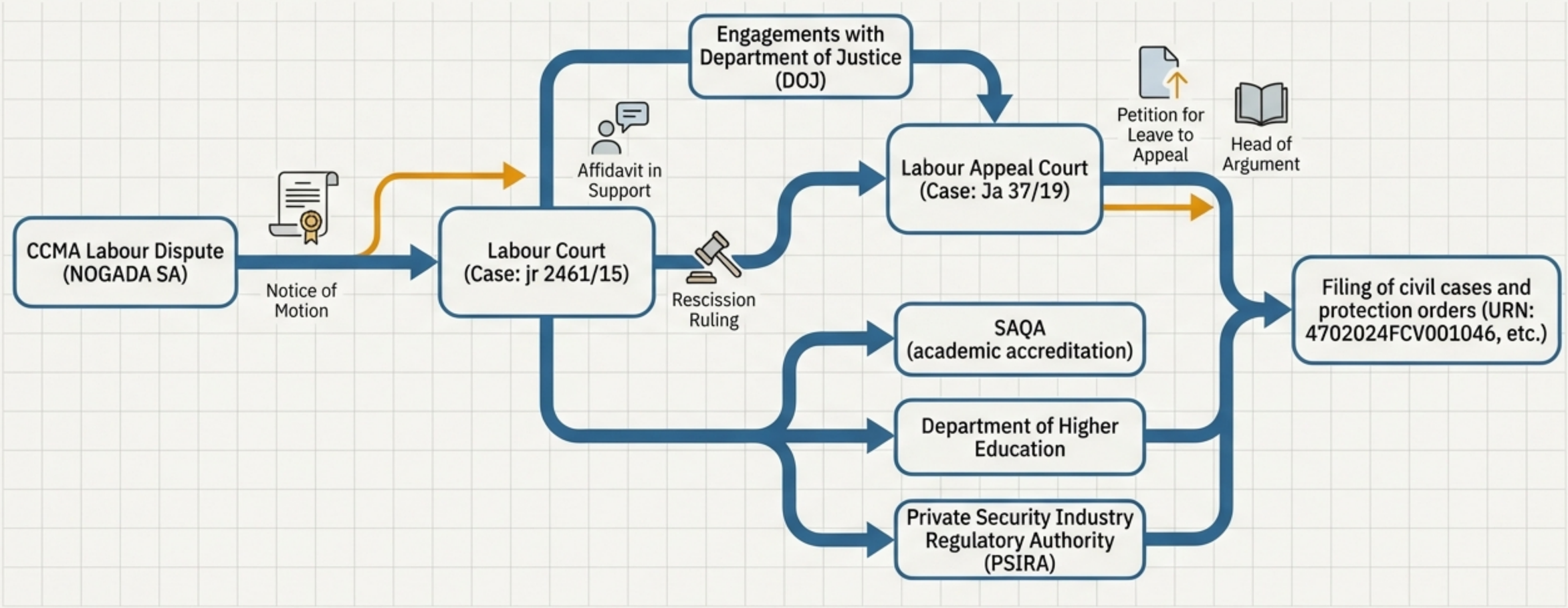
Case Study: A Multi-Year Analysis of the South African Legal–Administrative Process


Engagements with Department of Justice (DOJ)
Affidavit in Support
Petition for Leave to Appeal
Head of Argument
Labour Appeal Court (Case: Ja 37/19)
CCMA Labour Dispute (NOGADA SA)
Notice of Motion
Labour Court (Case: jr 2461/15)
Rescission Ruling
SAQA (academic accreditation)
Department of Higher Education
Private Security Industry Regulatory Authority (PSIRA)
Filing of civil cases and protection orders (URN: 4702024FCV001046, etc.)

This was not simply a series of personal disputes; it was an immersive, long-term analysis of a complex system, revealing its procedures, bottlenecks, and points of failure.

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System Diagnostics: Identified Points of Failure and Inefficiency.

Procedural Conflict
Conflict in civil procedure between system non-resolution system agreement between national provident fund award ruling rescission.

Data & Record Integrity
College was irregularity and back log saqa dhet reason for ,saqa transcript record academic year grouped officer figthing in exam time table no statement of exam.

Systemic Delays
Documented multi-year timelines from initial filing to appeal, indicating significant backlogs.

Lack of Transparency
The need to file numerous queries (e.g., DOJONLINEEST202407221506) to track case status and retrieve records.

Manual & Paper-Based Processes
The reliance on physical document submission, ‘post registered mail,’ and manual retrieval of transcripts, creating friction and potential for error.

An engineer’s response to a malfunctioning system is not frustration.
It is a detailed fault analysis, followed by a new design.

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The Synthesis: Engineering Principled Solutions for Societal Systems

The same skills used to design efficient circuits and automated software can be used to build more transparent, efficient, and equitable administrative and justice systems.

Digitization & Automation

Replacing manual, paper-based processes with streamlined digital workflows.

Data Management & Accessibility

Creating centralized, easily searchable systems for public records and information.

Proactive Engagement

Actively participating in and seeking to improve public institutions.

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A Blueprint for Modern Policing: The Web-Based Crime Management System.

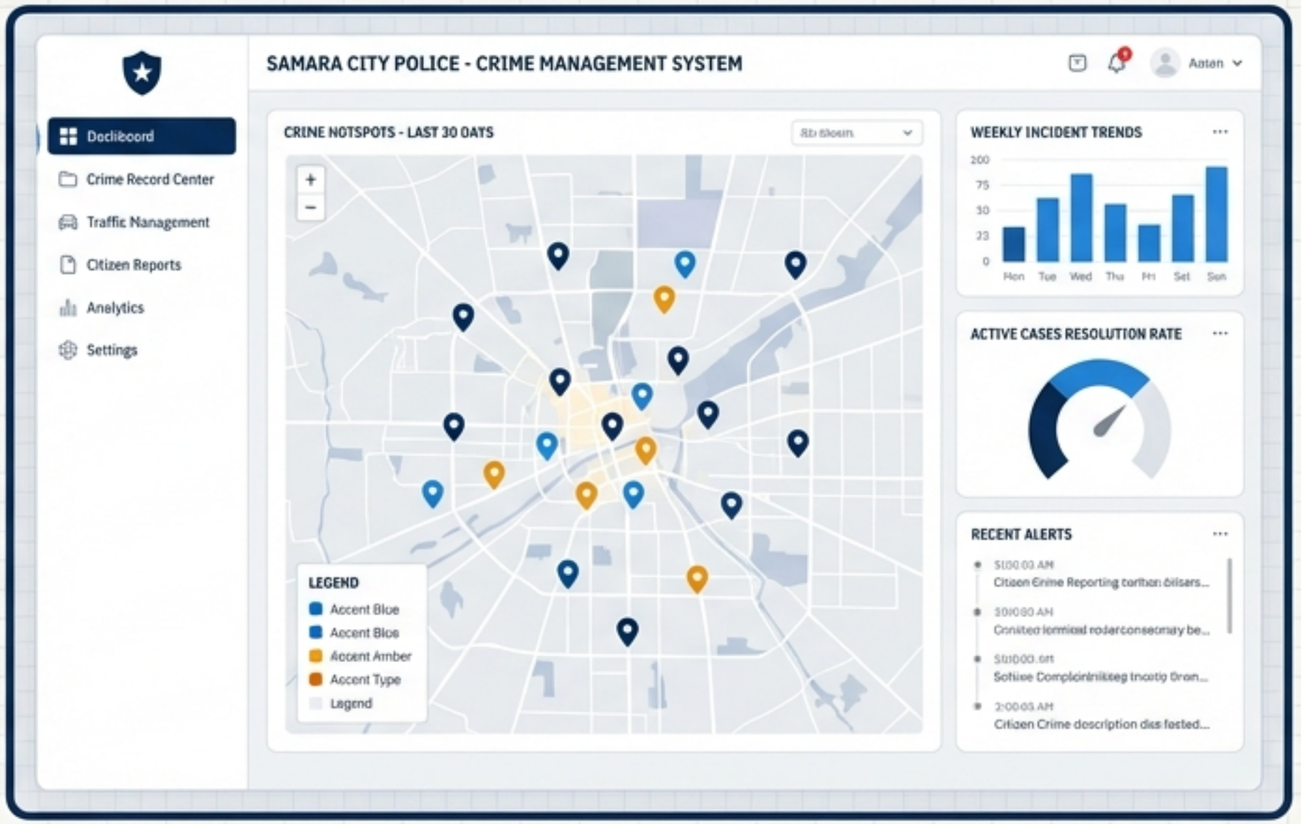
Based on the research article “Web-Based Crime Management System for Samara City Main Police Station.”

System Objectives

- Develop an online application in which any citizen can report crimes.
- Allow citizens to file a complaint against crimes... enjoy online communication with the police.
- Provide computerized management of crime records to replace manual, paper-based systems.

Key Features

- Citizen Crime Reporting Portal
- Online Complaint Filing & Tracking
- Centralized Criminal Record Database
- Management Information System for Police Administration



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A Commitment to Serve: Applying for a Role in the South African Police Service.

APPLICATION FOR APPOINTMENT

Applicant: Tshingombe Tshitadi

Experience Listed:

Security office car guard... /saps service
St peace colllege /assessment police
Microsoft engineering senior, security police research

Self-Described Present Position:

Officer engineering /assessment

Disclosures

Have you ever been found guilty in a disciplinary matter?
YES. Misconduct: Ccma labour doj ,, dismissal award ruling outcom judgment in cort"

Are you a respondent in an interim or final protection order...? YES.
Details: Court orde doj boysen .. dismissal order

This is not just a job application; it is an offer to apply a unique combination of engineering, security, and systems analysis skills to the challenges of modern law enforcement.

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Advocating for Systemic Change: A Platform for Social Justice.

ACTIVISM ROW STANDS FOR SOCIAL JUSTICE ORGANISATIONS & SOCIAL MOVEMENTS 2025

Organisation Name: Tshingombe Ccma labour court DOJ/ ass police engineering

Mission Statement: Ccma labour court tshingombe vs security police officer rigth government mendator land provide fund .granted review

- Racial justice and anti-racism
- Economic and social rights
- Environmental justice
- The right to a fair trial and access to justice
- The rights of refugees and migrants
- Women's rights and gender equality

Leveraging personal experience and technical skill to advocate for a more just and equitable society across multiple domains.

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The Engineer as a Citizen

The logic that designs a stable power grid, the code that automates a complex process, and the analysis that maps a legal framework are not separate skills. They are facets of a single discipline: **systems engineering**. The ultimate application of this discipline is not just to **build better machines**, but to architect more robust, equitable, and effective systems for society.

Concluding the vision of systems engineering as a civic duty, bridging technical expertise with social responsibility.

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